

What is claimed is:

1. A liquid-crystalline medium comprising
- 5 a) one or more liquid-crystalline compounds and
- b) polymers composed of one or more polymerizable compounds of the general formula (I)



10 where:

15 R is H, F, Cl, CN, SCN, SF₅H, NO₂, straight-chain or branched alkyl having from 1 to 12 carbon atoms, of which one or two nonadjacent CH₂ groups may be replaced by -O-, -S-, -CH=CH-, -CO-, -OCO-, -COO-, -O-COO-, -S-CO-, -CO-S-, -CH=CH- or -C≡C- in such a way that oxygen and/or sulfur atoms are not directly bonded together, or -X²-Sp²-P²,

20 P and P² are each independently a polymerizable group, preferably -O(CO)-(CH₂)_o-CH=CH₂, -O(CO)-CH=CH-(CH₂)_p-H, -CH=CH-(CH₂)_q-H, or -O(CO)-C(CH₃)=CH-(CH₂)_r-H where o, p, q, r = 0-8,

25 Sp¹ and Sp² are each independently a spacer group, preferably -(CH₂)_m- where m = 1-8, or a single bond,

30 X¹ and X² are each independently -O-, -S-, -OCH₂-, -CH₂O-, -CO-, -COO-, -OCO-, -OCO-O, -CO-NR⁰-, -NR⁰-CO-, -OCH₂-, -CH₂O-, -SCH₂-, -CH₂S-, -CH=CH-COO-, -OOC-CH=CH- or a single bond,

35 A¹ and A² are each independently 1,4-phenylene in which one or more CH groups may be replaced by N, 1,4-cyclohexylene in which one or more nonadjacent CH₂ groups may be replaced by O and/or S, 1,4-cyclohexenylene, 1,4-bicyclo(2,2,2)octylene, piperidine-1,4-diyl, naphthalene-2,6-diyl, decahydronaphthalene-2,6-diyl, 1,2,3,4-tetrahydro-

naphthalene-2,6-diyl or indane-2,5-diyl, and all these groups may be unsubstituted or mono- or polysubstituted by L,

5 L is F, Cl, CN or alkyl, alkoxy, alkylcarbonyl, alkoxy carbonyl or alkylcarbonyloxy having from 1 to 7 carbon atoms, in which one or more hydrogen atoms may be replaced by F or Cl,

10 Z¹ is -O-, -S-, -CO-, -COO-, -OCO-, -O-COO-, -OCH₂-, -CH₂O-, -SCH₂-, -CH₂S-, -CF₂O-, -OCF₂-, -CF₂-S-, -SCF₂-, -CH₂CH₂-, -CF₂CH₂-, -CH₂-CF₂-, -CF₂-CF₂-, -CH=CH-, -CF=CF-, -C≡C-, -CH=CH-COO-, -OCO-CH=CH-, CR⁰R⁰⁰ or a single bond, and

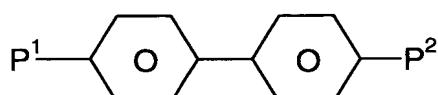
15 R⁰ and R⁰⁰ are each independently H or alkyl having from 1 to 4 carbon atoms,

 n is 0, 1 or 2.

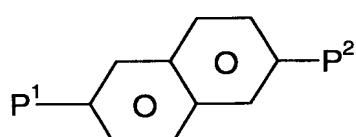
20 2. A liquid-crystalline medium as claimed in claim 1, characterized in that the polymerizable compounds are selected from the following formulae



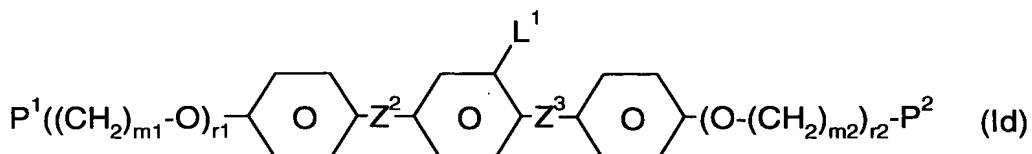
(Ia)

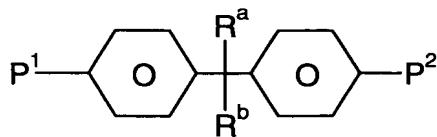


(Ib)

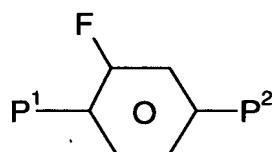


(Ic)

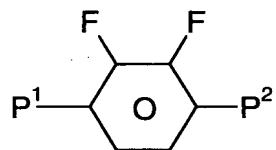




(Ie)

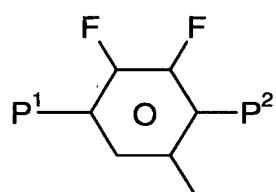


(If)

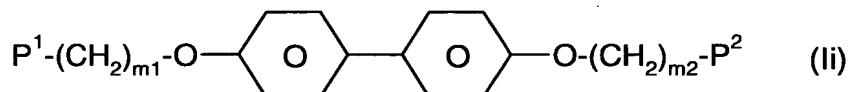


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(Ig)



(Ih)



(Ii)

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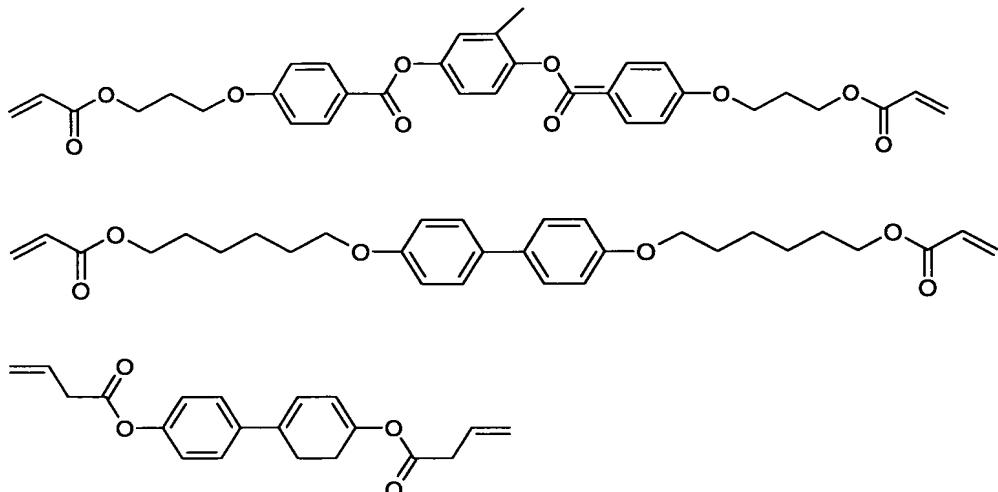
where P^1 and P^2 are each as defined above, Z^2 and Z^3 are each independently as defined for Z^1 , $m1$ and $m2$ are each independently from 1 to 8, $r1$ and $r2$ are each independently 0 or 1, and R^a and R^b are each independently H or CH_3 , and L^1 is H or $-CH_3$.

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3. A liquid-crystalline medium as claimed in claim 1 or 2, characterized in that P^1 and P^2 are each independently a polymerizable group selected from $-O(CO)-(CH_2)_o-CH=CH_2$, $-O(CO)-CH=CH-(CH_2)_p-H$, $-CH=CH-(CH_2)_q-H$ and $-O(CO)-C(CH_3)=CH-(CH_2)_r-H$

20 where $o, p, q, r = 0-8$.

4. A liquid-crystalline medium as claimed in one of claims 1-3, characterized in that the polymerizable compound is selected from the following compounds:



5. A liquid-crystalline medium as claimed in one of claims 1-4 comprising 0.01-10% by weight of polymer b).

10 6. A mixture for producing liquid-crystalline media as claimed in one of claims 1-5 comprising

- a) one or more liquid-crystalline compounds,
- b) one or more compounds of the general formula I,
- c) optionally one or more polymerization initiators.

15 7. A liquid crystal switching element comprising a liquid crystal layer of liquid-crystalline medium as claimed in one of claims 1-5.

20 8. An electrooptical liquid crystal display system comprising a multitude of liquid crystal switching elements as claimed in claim 7 which are arranged in matrix form.